WHAT IS CLAIMED IS:

1. A group-III nitride semiconductor light-emitting device comprising a single crystal substrate having thereon a light-emitting part structure comprising a gallium nitride phosphide ($GaN_{1-X}P_X$, wherein $0<X<1$) single crystal layer provided via a boron phosphide (BP)-based buffer layer.

2. The group-III nitride semiconductor light-emitting device as claimed in claim 1, wherein the boron phosphide-based buffer layer is amorphous.

3. The group-III nitride semiconductor light-emitting device as claimed in claim 1, wherein the boron phosphide-based buffer layer comprises a crystalline multilayer structure including an amorphous layer and a crystalline layer.

4. The group-III nitride semiconductor light-emitting device as claimed in claim 1, wherein the light-emitting part structure is a single hetero-junction structure comprising a gallium nitride phosphide single crystal layer.

5. The group-III nitride semiconductor light-emitting device as claimed in claim 1, wherein the light-emitting part structure is a double hetero-junction structure comprising a gallium nitride phosphide single crystal layer.

6. The group-III nitride semiconductor light-emitting device as claimed in claim 1, wherein a degree of lattice mismatch between the boron phosphide-based buffer layer and the gallium nitride phosphide single crystal layer is ±1% or less.

7. The group-III nitride semiconductor light-emitting device as claimed in claim 4, wherein a degree of lattice mismatch between the boron phosphide-based buffer layer and the gallium nitride phosphide single crystal layer is ±0.4% or less.

8. The group-III nitride semiconductor light-emitting device as claimed

in claim 5, wherein a degree of lattice mismatch between the boron phosphide-based buffer layer and the gallium nitride phosphide single crystal layer is ±0.4% or less.

9. The group-III nitride semiconductor light-emitting device as claimed in claim 6, wherein a degree of lattice mismatch between the boron phosphide-based buffer layer and the gallium nitride phosphide single crystal layer is ±0.4% or less.

10. The group-III nitride semiconductor light-emitting device as claimed in claim 1, wherein the boron phosphide-based buffer layer comprises boron phosphide (BP) and in the light-emitting part structure, the gallium nitride phosphide single crystal layer has a phosphorus (P) compositional ratio of 1 to 5%.

11. The group-III nitride semiconductor light-emitting device as claimed in claim 4, wherein the boron phosphide-based buffer layer comprises boron phosphide (BP) and in the light-emitting part structure, the gallium nitride phosphide single crystal layer has a phosphorus (P) compositional ratio of 1 to 5%.

12. The group-III nitride semiconductor light-emitting device as claimed in claim 5, wherein the boron phosphide-based buffer layer comprises boron phosphide (BP) and in the light-emitting part structure, the gallium nitride phosphide single crystal layer has a phosphorus (P) compositional ratio of 1 to 5%.

13. The group-III nitride semiconductor light-emitting device as claimed in claim 6, wherein the boron phosphide-based buffer layer comprises boron phosphide (BP) and in the light-emitting part structure, the gallium nitride phosphide single crystal layer has a phosphorus (P) compositional ratio of 1 to 5%.

14. A lamp comprising the group-III nitride semiconductor light-emitting device as claimed in claim 1, a mount lead and an inner lead.

15. A light source comprising the lamp as claimed in claim 14.

16. A method for producing a group-III nitride semiconductor light-emitting device, comprising

forming a boron phosphide (BP)-based buffer layer on a single crystal substrate, and

providing a light-emitting part structure containing a gallium nitride phosphide ($GaN_{1-x}P_x$, wherein $0<X<1$) single crystal layer.

17. The method for producing a group-III nitride semiconductor light-emitting device as claimed in claim 16, wherein the boron phosphide-based buffer layer is amorphous.

18. The method for producing a group-III nitride semiconductor light-emitting device as claimed in claim 16, wherein the boron phosphide-based buffer layer comprises a crystalline multilayer structure including an amorphous layer and a crystalline layer.

19. The method for producing a group-III nitride semiconductor light-emitting device as claimed in claim 16, wherein a degree of lattice mismatch between the boron phosphide-based buffer layer and the gallium nitride phosphide single crystal layer is ±1% or less.

20. The method for producing a group-III nitride semiconductor light-emitting device as claimed in claim 16, wherein a degree of lattice mismatch between the boron phosphide-based buffer layer and the gallium nitride phosphide single crystal layer is ±0.4% or less.

21. The method for producing a group-III nitride semiconductor light-emitting device as claimed in claim 16, wherein the boron phosphide-type buffer layer comprises boron phosphide (B) and the gallium nitride phosphide single crystal layer in the light-emitting part structure has a phosphorus (P) compositional ratio of 1 to 5%.